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PATENT & TRADEMARK OFFICE

Applicant : Lynn K. Gordon, M.
Serial No. : 09/484,577
Filed : January 18, 2000
Page : 2

Attorney Docket No. 074-9-02900

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Sub D17
1. (Amended) An isolated or recombinant nucleic acid comprising:
a nucleic acid sequence having at least 75% sequence identity to SEQ ID NO:3 or a nucleic acid encoding a polypeptide, wherein the polypeptide has a sequence as set forth in SEQ ID NO:4.

Sub E2
C1
Sub D18
2. (Amended) The nucleic acid of claim 1, wherein the sequence identity to SEQ ID NO:3 is at least 85%.

3. (Amended) The nucleic acid of claim 2, wherein the sequence identity to SEQ ID NO:3 is 95%.

4. (Amended) The nucleic acid of claim 3, wherein the nucleic acid comprises a sequence as set forth in SEQ ID NO:3.

Sub E4
9. (Amended) An isolated or recombinant nucleic acid which specifically hybridizes to a nucleic acid comprising a sequence as set forth in SEQ ID NO:3 under stringent conditions, wherein the stringent conditions include a wash step comprising a wash in 0.2X SSC at a temperature of about 65°C for about 15 minutes.

Sub D19
C2
10. (Amended) The nucleic acid of claim 1 or claim 9, wherein the nucleic acid is between about 15 and about 200 residues in length; is between about 25 and about 100 residues in length; or is between about 35 and about 75 residues in length.

11. (Amended) An expression vector comprising at least one nucleic acid operably linked to a promoter, wherein the nucleic acid comprises a sequence as set forth in claim 1 or claim 9.

12. (Amended) The expression vector of claim 11, wherein the nucleic acid is operably linked to the promoter in a sense orientation.

13. (Amended) The expression vector of claim 11, wherein the nucleic acid is operably linked to the promoter in an antisense orientation.

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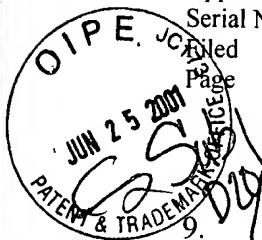
Page : 3

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14. (Amended) A transformed cell comprising the nucleic acid of claim 1 or claim 9.

Sub D2
C3
16. (Amended) A polymerase chain reaction (PCR) primer pair that can amplify a nucleic acid sequence as set forth in claim 1 or claim 9, or a subsequence thereof, under *in situ* or *in vitro* conditions.

Sub D2
C4
28. (Amended) A kit for detecting the presence of nucleic acid sequences associated with GCA in a sample comprising a nucleic acid as set forth in claim 1 or claim 9, wherein the nucleic acid of the sample detectably hybridizes to a nucleic acid as set forth in claim 1 or claim 9 under *in situ* or *in vitro* conditions.

29. (Amended) A kit for detecting the presence of nucleic acid sequences associated with GCA in a sample comprising an amplification primer pair that can amplify a nucleic acid in the sample having a sequence as set forth in claim 1 or claim 9 under *in situ* or *in vitro* conditions. --

Please add claim 43:

Sub D2
C5
43. A method of producing a polypeptide having an amino acid sequence comprising SEQ ID NO:4, comprising:
expressing the nucleotide of claim 1 or claim 9. --